



United States
Department of
Agriculture
Forest
Service

June 2005



ELLSWORTH PROJECT

**Towns of Campton, Ellsworth, and Rumney
Grafton County, New Hampshire**

Information and 30-Day Comment on Proposed Activities

**Prepared By
Ammonoosuc-Pemigewasset Ranger District
White Mountain National Forest**

For Information Contact: Janice Mulherin

Ammonoosuc-Pemigewasset Ranger District
White Mountain National Forest
1171 NH Route 175
Holderness, NH 03245
603-536-1315
www.fs.fed.us/r9/white

This document is available in large print.

Contact the White Mountain National Forest

Ammonoosuc-Pemigewasset Ranger District

Office

1-603-536-1315

TTY 1-603-536-3281

The United States Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political affiliation, sexual orientation, and marital or familial status (not all prohibited bases apply to all programs). Persons with disabilities who require alternative means of communication or program information (Braille, large print, audiotape, etc.) should contact the USDA's TARGET Center at 202/720-2600 (voice or TDD).

To file a complaint of discrimination, write the USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, Washington, DC, 20250-9410 or call 202/720-5964 (voice or TDD). The USDA is an equal opportunity provider and employer.

 **Printed on Recycled Paper** 

TABLE OF CONTENTS

WHERE IS THE ELLSWORTH PROJECT LOCATED?	2
WHAT IS THE FOREST SERVICE PROPOSING?	2
BACKGROUND	5
What is the Ellsworth Project Area like?	5
Why is the Forest Service evaluating the Ellsworth Project Area Now?	6
What past and future activities are relevant to the Ellsworth Project?	7
PURPOSE AND NEED	7
Why is the Forest Service proposing activities in the Ellsworth Project Area?	7
What can the Forest Service do to meet the needs identified for the Ellsworth Project Area?	8
WHAT DECISIONS WILL BE MADE?	8
PUBLIC INVOLVEMENT	9
How is the public invlved in the decision?	9
What unresolved issues where raised during the Scoping for the Ellsworth Project?	10
ALTERNATIVES	10
What alternatives are being considered for the Ellsworth Project?	11
How do the alternatives compare?	11
END NOTES	15
SUMMARY OF LANDSCAPE MANAGEMENT TERMS	26

Where is the Ellsworth Project located?

The Ellsworth Project Area (2,600 Ac) is located in the Towns of Campton, Ellsworth, and Rumney, Grafton County, New Hampshire, on the Ammonoosuc-Pemigewasset Ranger District of the White Mountain National Forest.

What is the Forest Service proposing?

The Ammonoosuc-Pemigewasset Ranger District is considering the implementation of Alternative 2 (Proposed Action) to meet the needs to increase early-successional habitat in Habitat Management Unit 408, to supply a sustainable flow of forest products, and provide continued access to the main snowmobile trails in the project area.

Tables 1 and 2 display the actions proposed by the Forest Service that are compatible with the Standards and Guidelines for silvicultural treatments and meet the needs for change identified for the Ellsworth Project Area. See Endnotes for a list of applicable mitigation measures.

Table 1: Activities by Alternative

Table 1: Activities Proposed for the Ellsworth Project Area

Activity	Stand Acres	Treatment/ Amount
VEGETATION MANAGEMENT :		
Even-Aged Management		
Clearcutting	108	90
Shelterwood/Preparatory Cut/Site Prep & Burn	49	42
Overstory Removal	16	16
Overstory Removal & Timber Stand Improvement	18	18
Timber Stand Improvement	44	44
Uneven-Aged Management		
Group Selection (groups range in size from 1/10 to 2 acres in size; ½ acre average) *	321	67
Group Selection & Timber Stand Improvement	67	14 14
Single Tree Selection	11	11
Single Tree Selection & Group selection combined	195	157 38
Timber Stand Improvement	17	4
Wildlife Habitat Management		
Apple Tree Pruning & liming	6	3
Create Opening	1	1
Total Even-Age, Uneven-Age & Habitat Acres	853	519
ESTIMATED HARVEST VOLUME		3.9 MMBF***
TRANSPORTATION		

Table 1: Activities Proposed for the Ellsworth Project Area

Activity	Stand Acres	Treatment/ Amount
Road Maintenance (Forest Roads FR 215, 431 and 605)		3.0 Miles
Maintenance of Existing Wildlife Openings		2 Acres
Trails		
Build ½ mile of snowmobile trail by-pass adjacent to FR 215		2640ft

* Over story will be removed when regeneration is established, approximately 5 years after prescribed burn.

** Groups harvested represent approximately 20% of stand acres

*** Million Board Feet

In addition to the timber harvesting, maintenance would be conducted prior to timber hauling on existing Forest Roads 215, 431, and 605. This would consist of removing blowdowns, replacing culverts where needed, adding surfacing, and maintaining ditches that have filled in with leaves and debris.

An environmental assessment (EA) is being prepared that considers the site-specific needs for the Ellsworth Project Area, the activities and alternatives proposed to implement management direction as outlined in the White Mountain National Forest Land and Resource Management Plan, as amended (USDA, 1986 [Forest Plan]). The Ellsworth EA documents in detail the expected effects that would result from implementing the different alternatives.

STAND	STAND ACRES	FOREST TYPE	APPROXIMATE TREATMENT ACRES	PROPOSED TREATMENT	SEASON OF HARVEST
COMPARTMENT 33					
3	6	Northern Hardwood	6	Timber Stand Improvement	N/A
11	166	Northern Hardwood	166 (33GS 133 ST)	Single Tree & Grp Selection	Winter
13	12	P.Birch/Softwd	2	Group Selection	Winter
20	20	Northern Hardwood	4	Group Selection	Winter
32	4	Northern Hardwood	4	Timber Stand Improvement	N/A
36	6	Opening	3	Apple Tree Pruning	N/A
40	9	Northern Hardwood	9	Clearcut	Winter
46	30	Northern Hardwood	8	Group Selection	Winter
48	5	Northern Hardwood	5	Clearcut	Winter
49	3	Northern Hardwood	3	Clearcut	Winter
50	30	Paper Birch/Aspen	8	Group Selection	Winter
51	20	Softwood	18	Shelterwood-Prep Cut & Burn	S, F, W**
52	16	Paper Birch	16	Shelterwood Removal	Winter
53	3	Northern Hardwood	3	Clearcut	Winter
54	7	Paper Birch/Aspen	7	Clearcut	Winter
55	6	Paper Birch/Aspen	6	Clearcut	Winter
58	17	Softwood	4	Group selection	S, F, W**
COMPARTMENT 38					
1	50	Mixed Wood	50 (10 Grp 10 TSI)	Group Selection Timber Stand Improvement	Winter
2	16	White Pine/Oak	16	Timber Stand Improvement	N/A
3	17	Northern Hardwood	4	Timber Stand Improvement	N/A
5	77	Northern Hardwood	13	Group Selection	Winter
14	67	Northern Hardwood	13	Group Selection	Winter
7	12	Northern Hardwood	12	Timber Stand Improvement	N/A
20	8	Northern Hardwood	8	Single Tree Selection	Winter
21	38	Northern Hardwood	20	Clearcut	Winter
COMPARTMENT 154					
5	17	P.Birch/Softwd	4	Group Selection	S, F, W**
11	17	Northern Hardwood	17	Clearcut	Winter
12	6	Northern Hardwood	6	Clearcut	Winter
17	29	Northern Hardwood	29 (5 GS 24 STS)	Single Tree & Group Selection	Winter
18	17	Northern Hardwood	8 (4 Gps 4 TSI)	Group Selection & Timber Stand Improvement	Winter
19	18	Northern Hardwood	4	Group Selection	Winter
20	18	Northern Hardwood	18	Overstory Removal & TSI*	Winter
21	7	Paper Birch	7	Clearcut	Winter
22	33	P.Birch/Softwd	7	Group Selection	S, F, W**
23	7	Paper Birch	7	Clearcut	S, F, W**
29	29	Softwood	24	Shelterwood-Prep Cut & Burn	S, F, W**
37	6	Northern Hardwood	6	Timber Stand Improvement	N/A
48	3	Northern Hardwood	3	Single Tree Selection	Winter
49	1	Northern Hardwood	1	Create Opening	N/A
TOTAL:	853 Acres		519 Acres	3.9 MMBF	

- * TSI – Timber Stand Improvement
- ** Summer, Fall, or Winter

Background

Project Areas are seen through the filtering lenses of Management Areas (MAs) and Habitat Management Unit (HMU). For a discussion of general management direction and scales used in project planning, including Management Areas and Habitat Management Unit (HMU), see Summary of Landscape Scale Management Terms in this document (p. 27).

What is the Ellsworth Project Area like?

The Ellsworth Project Area is approximately 2,600 acres of federal land within the 5560 acres of MA 2.1 and 3.1 area of HMU 408. The Project Area is managed using both even-aged and uneven-aged silvicultural systems within Management Area those lands. The Ellsworth Project Area represents approximately 0.4% of the White Mountain National Forest.

The Ellsworth Project Area has soils common to many other areas across the White Mountain National Forest. Soils are a mix of moderately well and well drained, fine sandy loams on 05-30% slopes, favorable primarily for northern hardwood forest or compacted, silt, loams on 0-10% slopes more suitable to softwood or softwood, hardwood mixtures. These soils correspond to areas of “suitable” land base where timber management is allowed on the Forest (MA 2.1 and 3.1 lands).

The soil erosion risk ranges from low to high, relative to other soils across the Forest where timber management occurs. Actual soil erosion based on previous experience at this site, and on similar soils across the Forest, is limited and site-specific because of careful selection of season of harvest, timely application of standards and guidelines, and routine road maintenance on permanent roads. There are no soils here subject to deep soil slump or dry debris slide. There is no on-the-ground evidence of surface soil erosion on roads or previously used skid trails in the Ellsworth Area. The Proposed Sale is on soil that is generally richer in soil calcium than some parts of the White Mountain National Forest based on the geology of the bedrock that likely contributed to it.

The Project Area is located in four watersheds: Ellsworth Pond, Unnamed Tributary, Bog Brook, and Loon Lake watersheds.

The Project Area contains mixed northern hardwood forest habitat suitable to common woodland plant and wildlife species found in the White Mountain National Forest. Site-specific field surveys documented common plants, shrubs, grasses, ferns, and trees and common wildlife species such as grouse, deer, moose, and bear. Database checks and field surveys also confirmed there are no known documented occurrences of federal listed plant or wildlife species within the proposed harvest units.

The cultural sites in the Project Area are a result of past farming, timber and maple sugar production in the early 1800s to 1900s. Visible remains include stone walls, roads, signs of past mining activity, logging camps and old foundations.

Recreation use in the Ellsworth Area consists primarily of snowmobiling and hunting. A snowmobile corridor trail runs through or adjacent to several stands proposed for harvesting during the winter. The safety of snowmobile operators

could be compromised if concurrent use of skid trails and roads were attempted. There are no campgrounds in the Project Area. A moderate amount of small and large game hunting occurs in the Project Area, primarily in the fall.

The primary viewpoints are from commercial shopping areas along NH Route 25 in Plymouth, the traffic circle between NH Route 25 and NH Route 3A in Plymouth, and from a rural farm located along Campton Bog Road. The proposed harvesting was designed using these primary viewpoints.

The Visual Quality Objective of an area is determined by assigning a combination of sensitivity level, variety class and distance zone. Sensitivity level is defined as a measure of people's concerns for the scenic quality of the National Forest. The viewpoints are classified as sensitivity levels 1, 2, and 3 (WMNF Forest Plan pp VII-I-1), with 1 being the highest. Sensitivity Level 2 areas include such areas as the snowmobile trail; whereas Sensitivity Level 1 would include such area as roadside of the Ellsworth and East Rumney Roads. Sensitivity Level 2 is the most common.

The Variety Class which is defined in the Forest Plan on pp. VII-I-1. Variety Class identifies the scenic quality of the landscape based on the amount and combination of landform, vegetation, waterform, and rockform. Variety class helps determine those landscapes that are most important and those that are of lesser values from the standpoint of scenic quality. Variety Class B (Common) is the most common variety class in the Project Area.

Once the sensitivity level, variety class, and distance zone has been determined, the Visual Quality Objectives (VQO) for the project area (Forest Plan VII-I-1 and VII-C-17-19) is assigned. The mapped VQOs for the Project Area are generally Retention and Partial Retention within the Foreground and Middleground Zone. The guidelines for the amount of seen area for different harvesting methods are described in the Forest Plan. The proposed harvesting meets all requisite guidelines.

Why is the Forest Service evaluating the Ellsworth Project Area now?

When forested areas are managed to produce wildlife habitats and wood products, growth in the size and density of the trees is important. Over time, stands that have been previously clearcut have become restocked with tree seedlings. When these stands reach sapling size, they no longer provide early-successional habitat. Also in stands that were partially cut to reduce stocking levels (area occupied by trees), tree growth has increased stocking levels to the point where competition for light, moisture, and soil resources result in reduced growth and stress for individual trees. Over time, stands age to the point where they are considered mature.

Analysis of an area every 15-20 years is the right interval for assessing habitat diversity and the potential need to harvest tree growth and regenerate stands to maintain a sustainable forest.

Vegetation management last occurred in Compartments 33, 38, and 154 (Ellsworth Project Area) in the mid to late 1980s. Individual stand stocking levels have increased following the most recent harvest activities. Surveys conducted in Compartments 33, 38, and 154 determined that some stands have reached maturity, competition between individual trees has slowed growth, crowded trees are stressed, which could cause mortality, and the regenerating age class has

grown into the young age class. A severe ice storm in 1998 injured many trees above 1700 ft of elevation. The effected area has a majority of damaged and declining trees.

What past and future activities are relevant to the Ellsworth Project?

The most recent vegetation management in the Ellsworth Project Area was the Avery Brook, Bald Mountain and Ellsworth Sales in the early and mid 1980s in HMU 408.

Purpose and Need

Why is the Forest Service proposing activities in the Ellsworth Project Area?

The purpose of this proposed project is to implement Forest Plan direction in the Ellsworth Project Area by addressing site-specific needs and opportunities to move the area from the existing condition towards the desired condition. This can be accomplished by implementing activities approved in the Forest Plan (vegetation management).

An interdisciplinary team has identified site-specific needs for natural resource management that would change or enhance the present conditions and move the Project Area toward the desired condition described in the Forest Plan, as amended (pp. III-30 through III-41).

There are approximately 7,000 acres of federal land in HMU 408. The proposed Ellsworth Project Area is located within MA 2.1 and 3.1 lands of compartments 33, 38, and 154, which comprise approximately a third of HMU 408. This HMU also contains areas that are not subject to vegetation management including MA 6.1 and 6.3.

The need for change is determined by comparing desired conditions in the Forest Plan with the existing conditions in the Project Area. The Forest Plan provides desired conditions for even and uneven-aged management systems for management areas 2.1 and 3.1 and for Habitat Management Unit by even- and uneven-aged management systems. The even-aged and uneven-aged desired conditions apply to the Forest as a whole and are not prorated for each Project Area (Forest Plan, pp. III-32 & III-38).

Existing resource conditions in the Ellsworth Project Area were evaluated against the Forest Plan desired condition. Based on Forest Plan goals and objectives and the differences between existing conditions and desired conditions, several needs and opportunities for the Project Area have been identified. The following list describes the “needs for change” identified for the Ellsworth Project Area that would meet the project’s purpose of implementing the Forest Plan. Protecting riparian values, maintaining and protecting habitat for proposed, threatened, endangered, and sensitive species, and maintaining healthy and resilient watersheds into the future have been and will continue to be primary considerations in management of the Ellsworth Project Area.

1. At the landscape level, there is little diversity of age classes. Regeneration habitat (trees 0-9 years old) makes up 1% of HMU 408 due to the lack of recent harvesting. There is a need to increase the amount of the 0-9 year old forest type to improve wildlife habitat diversity for species that use an early-successional

habitat such as neo-tropical migratory birds (Forest Plan, pp. III-13, VII-B-4 & VII-B-5). Opportunities exist, through commercial timber harvesting and reforestation treatments, to improve the growth, vigor, and health of forested stands by harvesting mature or poor quality trees and regenerating new trees, and thus to provide a variety of wildlife habitat types and conditions. Stands would be harvested in accordance with the appropriate silvicultural guidelines and Forest Plan direction. Commercial harvesting activities could include group and single tree selection, overstory removal, and clearcutting. Noncommercial vegetative treatments could include timber stand improvement, in young growth, apple tree pruning and development of wildlife opening habitat.

2. Congress annually funds the Forest Service to provide commercial timber within the capability of the lands and individual Forest Plans. The White Mountain National Forest Plan allocates land for sustainable wood production (MAs 2.1 and 3.1). People's demand for hardwood and other wood products continues to be high, which supports the need to supply this renewable resource. Projects such as this, which supply wood products, provide a means to satisfy people's demand for wood and contribute to the economic viability of local communities (Forest Plan, III-3 and III-30).
3. In both the short- and long-term, an adequate transportation system to access the Project Area is needed for management of National Forest Lands (Forest Plan, III-31, and III-34). This project would maintain existing roads within the Project Area. No new roads are proposed in any alternative.

What can the Forest Service do to meet the needs identified for the Ellsworth Project Area?

To move toward the desired condition envisioned in the Forest Plan, changes in the existing condition can be accomplished by harvesting mature or poor quality trees and regenerating new trees (Forest Plan, pp. III-3 & III-36). Stands would be harvested in accordance with the appropriate silvicultural guidelines (Forest Plan, Appendix C-1) and Forest Plan direction.

Activities could include clearcutting, group selection, single tree selection, overstory removal, timber stand improvement, apple tree pruning and creating a wildlife opening. These activities would provide a variety of wildlife habitat types, conditions, as well as sawtimber and wood fiber (Forest Plan, III-3 and III-30).

Wildlife habitat diversity for species that use early-successional habitat would be created through various vegetation management treatments including 90 acres of clear cuts, 34 acres of overstory removal and 42 acres of shelterwood prep cuts that will eventually produce overstory removals to release young growth.

The timing or location of snowmobile use would be controlled to protect public safety.

What decisions will be made?

The Ellsworth Project EA will evaluate site-specific issues, consider alternatives, and analyze the effects of the activities proposed in those alternatives. Based on the needs identified for the Ellsworth Project, the scope of the project includes decisions concerning vegetation and wildlife habitat management, snowmobile

use and road maintenance. The EA will provide the deciding officer (Pemigewasset District Ranger) with the information necessary to make informed decisions with regard to the Ellsworth Project, and will provide the basis for determining:

- Which actions, if any would be approved (which alternative to implement) that would move the Ellsworth Project Area towards the desired condition per Forest Plan direction and addresses the needs and issues identified for this project?
- What mitigation measures and monitoring requirements should the Forest Service apply to the proposed activities?
- Does the proposed project have significant impacts that would trigger the need to prepare an Environmental Impact Statement?
- Will a Forest Plan amendment be required to implement this project?

If an action alternative is selected, implementation could begin during dry summer conditions of 2005 and last for up to several years.

Public Involvement

How is the public involved in this decision?

The Forest Service mailed a Scoping letter to approximately 340 interested parties on January 12, 2005. Sixteen (16) individuals commented on the proposed action during the formal Scoping process. These sixteen individuals received a follow up letter sent on March 2, 2005 that added the opportunity for potential prescribed burning, which had been omitted from the original mailing.

The proposal was listed in the White Mountain National Forest Schedule of Proposed Actions (Ellsworth Vegetation, Recreation, and Wildlife Management Project) in December 2004.

The sixteen comments received from the Scoping process were used to define unresolved issues, to develop alternatives, and to analyze effects.

At this time the Forest Service is looking for substantive, site-specific comments on:

- How well the alternatives/proposed activities respond to the needs identified for the Ellsworth Project;
- How well the alternatives/proposed activities respond to the significant issues identified for the Ellsworth Project; and
- The anticipated effects of the activities associated with the alternatives/proposed activities proposed for the Ellsworth Project.

To be substantive, comments should be specific to the activities proposed for the Ellsworth Project and within the scope of the project: the need to move towards the Forest Plan goals of providing wildlife habitat, harvesting forest products, and improving forest stands in HMU 408 and to maintain the sustainability of the forested vegetation in Compartments 33, 38, and 154.

Substantive comments will be used to refine the analysis in the Ellsworth EA and will provide the commentor with the right to appeal the Ellsworth decision in the future (36 CFR 215).

What Unresolved issues were raised during Scoping for the Ellsworth Project?

The Forest Service separated issues into two groups:

- Issues addressed or resolved elsewhere or at a higher level; or
- Issues used to develop alternatives

The Council on Environmental Quality (CEQ) National Environmental Policy Act (NEPA) regulations requires this delineation of issues in Sec. 1501.7, “. . . identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review (Sec. 1506.3)...”

Resolved issues were identified as those:

1. Outside of the scope of the proposed action - issues that didn't relate to the needs defined for the Ellsworth Project:
2. Already decided by law, regulation, Forest Plan, or other higher-level decisions - such as whether clearcutting is appropriate on the National Forest;
3. Irrelevant to the decision being made - issues that would not be covered by the scope of the project as defined by the needs for change in the Ellsworth Project Area, such as develop a bike trail in the Project Area;
4. Conjectural or not supported by factual evidence - issues disputing Forest Service findings that are based on opinions and not scientific facts.

Resolved issues received during Scoping can be found in the Endnotes Section.

Unresolved issues were defined as those directly or indirectly caused by implementing the proposed action. The Forest Service identified the following unresolved issue from Scoping responses: Potential conflicts and safety issues regarding timber hauling and snowmobile use of Forest Service Road 215.

Alternatives

What alternatives are being considered for the Ellsworth Project?

The interdisciplinary team considered three alternatives shown below for the Ellsworth Project, including the Proposed Action and No Action Alternatives.

If an action alternative is implemented, actual amounts of activities accomplished on the ground (measured in acres, miles, or board feet) may differ slightly from current estimates. All variances would be evaluated to ensure that any effects are within the parameters of the effects analyzed in the Ellsworth EA and would be documented in the Ellsworth project file.

Alternative 1 – No Action

Under Alternative 1, current and on-going management activities would continue, but no new vegetation or road management activities proposed in the Ellsworth Scoping Report would be initiated. Changes might occur through current

management direction (such as road maintenance), natural processes, or other management decisions in the future. This No Action alternative provides the foundation for describing and comparing the magnitude of environmental changes associated with the action alternatives.

Alternative 2 - Proposed Action

Alternative 2 is the New Proposed Action developed from unresolved issues from Scoping. Under this alternative approximately 210 acres would receive even-aged treatment and 305 acres would receive uneven-aged vegetation treatment; road maintenance would occur on 3 miles of existing roads; 4 acres of wildlife openings would be created or maintained; and approximately 42 acres of shelterwood treatments would receive an application of prescribed burning. No new roads are proposed for any of the alternatives. This alternative would provide a snowmobile by-pass of approximately .5 miles parallel to Forest Road 215. This by-pass would provide for snowmobile use of the Project Area during harvest operations. The Proposed Action is a collection of possible vegetative treatments, wildlife habitat improvements, and road maintenance activities that would follow Forest Plan Standards and Guidelines, and serve to move the Ellsworth Project Area toward the desired condition set forth in the Forest Plan (Forest Plan pp/III-30-41).

Alternative 3

Alternative 3 is the proposed activities published in the Ellsworth Scoping Report during January 2005. The vegetative management proposal is the same as alternative 2. In this alternative the snowmobile trails would be closed while the timber harvesting is in progress.

Alternatives Considered But Not Carried Forward

An alternative was also considered that would have allowed both harvesting and snowmobiling in the project area but at different times. Harvesting would have been restricted to weekdays and snowmobiling on weekends. This alternative was dropped due to the difficulty of maintaining acceptable trail quality and safety issues relative to potential confusion on times of harvest and trail use.

How do the alternatives compare?

This section includes a comparison of alternatives considered in detail for the Ellsworth Project. This section also presents the alternatives in a comparative form, defining the differences between each alternative.

By comparing the amounts of activities in each alternative to the Forest Plan goals and the project specific needs, a comparison can be made as to how each alternative best meets those goals and needs (Table 3).

Table 3 Comparison of Alternatives by Potential Resource Effects

Resource	Alternative 1	Alternative 2	Alternative 3
SOCIAL ENVIRONMENT			
HERITAGE			
Direct/Indirect Effects: Ellsworth Project Area - 2.1 and 3.1 Lands in Compartments 33, 38, and 154; Approximately 4,100 Ac	No change from present	Mitigation measures will protect known sites during implementation; any new sites will also be avoided and protected.	
Cumulative Effects: HMU 408, Compartments 33, 38, and 154			
RECREATION, ROADLESS, AND VISUAL RESOURCES			
TRAILS: Direct/Indirect Effects: Ellsworth Project Area - 2.1 and 3.1 Lands in Compartments 33, 38, and 154; Approximately 4,100 Ac	No change from present.	Mitigation measures would protect snowmobiling, hiking, and biking trails. A snowmobile by-pass would be provided for snowmobile use during harvest operations.	Mitigation measures would protect existing snowmobiling, hiking, and biking trails. A snowmobile by-pass would not be provided for snowmobile use during harvest operations. To insure public safety, portions of the snowmobile trail within the project area would be closed while harvesting operations are underway.
VISUAL: Direct/Indirect Effects: The foreground and middle ground view from portions of East Rumney Road where timber harvesting will occur and the background view from along Route 25 in Plymouth.	No change in the VQO Over time, the continually maturing forest landscape, as seen from Route 25, Tricothic Road and the East Rumney Road would lose vegetative visual diversity (vegetative species and age classes).	Visual Quality Objective of Partial Retention and Modification would be maintained.	
VISUAL: Cumulative Effects: The immediate foreground view from the East Rumney Road and Tricothic Road and the Middleground and background view from Route 25 in Plymouth.	The VQO of Partial Retention or Modification is maintained - Over time, the continually maturing forest landscape, as seen from Route 25, the Tricothic Road and East Rumney Road would lose visual diversity (vegetative species and age classes).	The harvesting along East Rumney Road and Tricothic Road in the adjacent area would meet the overall visual quality objectives of the area.	
COMMUNITY,ECONOMICS, AND ENVIRONMENTAL JUSTICE			
Direct/Indirect Effects: Ellsworth Project Area - 2.1 and 3.1 Lands in Compartments 33, 38, and 154; Approximately 4,100 Ac	Net to the US Treasury = minus ----\$450,040. Potential Timber Tax generated for Town of Campton, Ellsworth, and Rumney = Zero.	Net to US Treasury. = \$450,040. Potential Contribution to 25% Fund: \$112,510. Potential Timber Tax generated for Town of Campton, Ellsworth, and Rumney = \$45,000. Direct employment for local workers. Forest products for local mills. Use of snowmobile trails in the project will not be interrupted. Income received by local business from that activity will continue.	Net to US Treasury. = \$450,040. Potential Contribution to 25% Fund: \$112,510. Potential Timber Tax generated for Town of Campton, Ellsworth, and Rumney = \$45,000. Direct employment for local workers. Forest Products for local mills. Snowmobile use within the project area will be interrupted. Because it is a loop system, overall trail use in the area will be substantially reduced. This will reduce income to local businesses.
PHYSICAL ENVIRONMENT			
TRANSPORTATION			
<i>Direct/Indirect Effects:</i> Ellsworth Project Area - 2.1 and 3.1 Lands in Compartments 33, 38, and 154; Approximately 4,100 Ac	Road maintenance will not occur on FR 215, 431, AND 605. With no activities taking place, there will be no direct/indirect effects.	Pre-haul maintenance on 3.0 miles of Forest Road 215, 431, and 605 consisting of clearing blowdowns, replacing culverts, smoothing out road bed, and opening drainage ditches where needed.	Pre-haul maintenance on 3.0 miles of Forest Road 215, 431, and 605 consisting of clearing blowdowns, replacing culverts, smoothing out road bed, and opening drainage ditches where

Table 3 Comparison of Alternatives by Potential Resource Effects

Resource	Alternative 1	Alternative 2	Alternative 3
		11 log landings (10 existing, 1 new; 7 ac) 6-8 miles of temporary skid trails mostly winter operation. Snowmobile trail coordination and signing would be done during timber harvesting operations and crossings of trail would be signed and limited to 6 crossings.	needed. 11 log landings (10 existing, 1 new; 7 ac) 6-8 miles of temporary skid trails mostly winter operation.
<i>Cumulative Effects:</i> Compartments 33, 38, and 154; Present – 2016; 4,100 Acres	No change from the present.	Pre-haul maintenance on 3.0 miles of Forest Road 215, 431, and 605 consisting of clearing blowdowns, replacing culverts, smoothing out road bed, and opening drainage ditches where needed. 11 log landings (10 existing, 1 new; 7 ac) 6-8 miles of temporary skid trails mostly winter operation. Snowmobile trail coordination and signing would be done during timber harvesting operations and crossings of trail would be signed and limited to 6 crossings.	Pre-haul maintenance on 3.0 miles of Forest Road 215, 431, and 605 consisting of clearing blowdowns, replacing culverts, smoothing out road bed, and opening drainage ditches where needed. 11 log landings (10 existing, 1 new; 7 ac) 6-8 miles of temporary skid trails mostly winter operation.
SOIL			
<i>Direct/Indirect Effects:</i> Ellsworth Project Area – 2.1 and 3.1 Lands in Compartments 33, 38, and 154; Approximately 4,100 Ac	No change from the present.	Low risk, minor erosion, mitigated by winter harvest and moderate terrain and no extraordinary soil hazards and adherence to BMP’s and Forest Plan Standards and Guidelines. Sale administrator would monitor operation and modify operations as needed to prevent soil erosion.	
<i>Cumulative Effects:</i> HMU 408.	No change from the present.		
WATER			
<i>Direct/Indirect Effects:</i> Ellsworth Project Area – 2.1 and 3.1 Lands in Compartment 33, 38, and 154; Approximately 4,100 Ac	No change from the present.	There is low risk of short-term, minor effects to water resources associated with temporary stream crossings, skid trails, landings, and snowmobile trail relocation because no accelerated soil erosion impact is expected (Direct and Indirect Effects on Soil, above). Because the potential for short-term effects is low, long-term effects to the water resources are also expected to be low (see Cumulative Effects on Water Resources -Alternatives 1-3).	There is low risk of short-term, minor effects to water resources associated with temporary stream crossings, skid trails, and landings, because no accelerated soil erosion impact is expected (Direct and Indirect Effects on Soil, above). Because the potential for short-term effects is low, long-term effects to the water resources are also expected to be low (see Cumulative Effects on Water Resources -Alternatives 1-3).
<i>Cumulative Effects:</i> Ellsworth Pond, Unnamed Tributary, Bog Brook, and Loon lake watersheds.	Clearcutting in the Ellsworth Pond, Unnamed Tributary, Bog Brook, and Loon lake watersheds is less than 5% over two decades, which is well below the Forest Plan guideline of no more than 25% in one Therefore there are no Cumulative effects to the water resource as a result of activities proposed in the Ellsworth Project.		
AIR			
<i>Direct/Indirect Effects:</i> Ellsworth Project Area – 2.1 and 3.1 Lands in Compartments 33, 38, and 154; Approximately 4,100 Ac	No change from the present.	Because of the limited duration of operation of emission-generating equipment associated with timber harvesting, and because this equipment will generally be operated in the winter months, with some exceptions, it is unlikely that the proposed operations would exceed the NAAQS. These emissions may contribute to ground level ozone in the project area, but they would be short in duration and limited to the areas of operation on any given day.	
<i>Cumulative Effects:</i> Ellsworth Pond, Unnamed Tributary, Bog Brook, and Loon lake watersheds.	Because of the limited duration of the operation of emission-generating equipment associated with harvesting activities, and because this equipment will generally be operated in the winter months, with some exceptions, it is unlikely that the NAAQS would be exceeded. New large sources of ozone in the cumulative effects area are unlikely since most of the cumulative effects area on the forest and remaining portion on private land is largely undeveloped.		
BIOLOGICAL ENVIRONMENT			
TERRESTRIAL WILDLIFE HABITAT			
<i>Direct/Indirect Effects:</i> Ellsworth Project Area – 2.1 and 3.1 Lands in Compartments 33, 38, and 154; Approximately 4,100 Ac	There would be a slight increase in the proportions of spruce/fir habitat community type through natural selection but no measurable change in overall species or habitat type.		
<i>Cumulative Effects:</i> HMU 408, MA 2.1 and	None of the alternatives would significantly change the habitat community composition by the end of the decade.		

Table 3 Comparison of Alternatives by Potential Resource Effects

Resource	Alternative 1	Alternative 2	Alternative 3
3.1 lands: 6,000 acres.			
AQUATIC RESOURCES			
Direct/Indirect Effects: Ellsworth Project Area - 2.1 and 3.1 Lands in Compartments 33, 38, and 154; Approximately 4,100 Ac	No direct or indirect effects to aquatic resources.		
Cumulative Effects: Ellsworth Project Area - 2.1 and 3.1 Lands in Compartments 33, 38, and 154; Approximately 4,100 Ac	No direct or indirect effects to aquatic resources.		

Endnotes

1. **Forest Wide Standards and Guidelines**: The generally applicable Forest and Management area-wide Standards and Guidelines listed in the Forest Plan in sections III and appendix VIIB:18-22 and NH State Best management Practices (BMPs) are applicable to all action alternatives.

Table's M/A,B,C contains mitigation actions for the activities proposed in the Ellsworth Project. This table displays the resource affected, the location to which the mitigation applies, the mitigation action and type, and the timing of the action.

The following key is used to describe the type of mitigation action being used and is shown in boldface following the actions:

Avoidance - Avoid the impact altogether by not taking a certain action or parts of an action.

Minimize - Minimizing impacts by limiting the degree or magnitude of the action and its implementation.

Rectify - Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.

Maintenance - Reduce or eliminate the impact over time by preservation and maintenance operations during the life of the action.

Monitor - Evaluate effects of an action. Design and build any new access, regardless of type, according to standards and criteria that focus on minimum impact.

Table M-A Ellsworth Mitigation Measures

Resource	Location	Mitigation Action and Type	When to Accomplish
Wildlife	All Units	Retain mast producing beech trees heavily used by black bear unless a safety hazard, or located in regeneration units. Avoidance	During marking
Wildlife	All Units	Retain existing large downed woody material in proposed harvest units on the forest floor where feasible. Avoidance	During marking and harvesting
Wildlife	All Units	All action alternatives would retain snags per USFWS BO Terms & Conditions and Forest Plan TES Amendment for the protection of Indiana bat unless a safety hazard. If snags are felled, retain as large woody material on the ground. Retain snags as much as practical within OSHA regulations. Avoidance	During marking and harvesting
Wildlife	Project Area	All action alternatives are consistent with applicable standards and guidelines outlined in the Canada Lynx Conservation Assessment and Strategy for the maintenance of suitable lynx habitat. Avoidance	Project planning & implementation
Wildlife	Sale area as applicable	All action alternatives would use non-invasive seed mix and straw mulch (where and when available) and as needed to prevent the introduction of invasive exotic plant species during revegetation closure work. Minimize	During implementation
Aquatic	All Units	Large coarse woody material on the ground in riparian area and outside of harvest units shall be left in place for amphibian and reptile habitat. Avoidance	During marking
Aquatic	Sale area as applicable	Designate major skid trails and minimize the number of stream crossings. Minimize	During project planning and implementation
Aquatic/ Soils & Water, Vegetation	Project Planning	Winter Harvesting where feasible. Minimize	Project planning and implementation
Heritage	Project Area	If, in the course of any project activities, previously unknown sites or artifacts are located, activities will stop immediately in that location. The district heritage paraprofessional and Forest archaeologist will be called in to evaluate the finds and make recommendations on how to proceed. Minimize, Avoidance	Project layout, During implementation
Recreation	Snowmobile Corridor Trail	During winter operations, "Caution: Logging" signs will be posted at both entry points along the Snowmobile Corridor. These signs would be required by the sale contract in the area where the trail and harvesting occur. Reduce speed and stop signs will be posted when harvesting operations are in progress. A flag person will be posted on the trail whenever trees are felled within 150 feet of the trail. Coordination with snowmobile clubs will occur prior to sale activity. Law enforcement in this area will be emphasized during the contract period. Minimize	During implementation

Table M-B: Ellsworth Mitigation Measures cont.

Resource	Location	Mitigation Action and Type	When to Accomplish
Visual	East Rumney Road & Tricothic Road	Remove slash for 100' from the edge of road and snowmobile trail. Minimize	Sale Administration
Vegetation	All Treatment Units	Indigenous, minority tree species or beech trees genetically resistant to scale complex would be encouraged in uneven-aged treatments by cutting trees around them that compete for space and resources. In even-aged regeneration treatments, these species would be protected and buffered with a group of other leave trees. Minimize	Sale layout, marking, and administration
Vegetation	Timber Sales	Use native vegetation and straw (if available) during revegetation practices per Executive Order 13112, 23/99. Minimize	Sale Administration
Vegetation	Timber Sales	The location of log landings will be agreed upon in advance with district sale administrator. Minimize	Sale Administration
Vegetation	Timber Sales	If listed plants are found during project implementation, the sale administrator would alert the district biologist and botanist and protective measures would be taken. Avoidance	Sale Administration
Vegetation	Timber Sales	Regeneration treatments, even- and uneven-aged, will be followed by surveys to determine the success of natural regeneration. If natural regeneration fails, then new trees grown from local seed sources would be planted. If species mix is not meeting objectives or if there are desirable, minority of wildlife trees being suppressed, a timber stand improvement (TSI) treatment will be used to release a desirable mix of young trees. Maintenance	Ecosystem Team
Soils & Water	Timber Sales	Use designated skid trails and landings. Minimize	Sale layout, Marking, and Administration
Vegetation	Timber Sales	If listed plants are found during project implementation, the sale administrator would alert the district biologist and forest botanist and protective measures would be taken. Avoidance	Sale Administration
Vegetation	Timber Sales	In clearcuts/overstory removals, a mix of residual trees would be left to improve wildlife habitat, modify the visual appearance of the stand and add diversity to the composition of the future stand. In clearcuts or group selection treatments, where residual understory plants interfere with the germination and development of desirable tree seedlings, a mechanical site preparation treatment would be used to control low shade. If seedlings develop, but are controlled by residual vegetation, a release treatment (TSI) would be applied by removing some of the interfering woody vegetation. Maintenance	Sale layout, marking, and administration

2. **Details of Stand Treatment**, Table 2 displays the individual stands, prescriptions and season of harvest. (Alternatives 2 and 3 have the same vegetation treatment Prescriptions).

3. **Visual Quality Objectives** - A desired level of scenic quality. Refers to the acceptable degree of alteration of the characteristic landscape:

Partial Retention – A visual quality objective that means that the management activities may be evident but must remain subordinate to the characteristic landscape.

Modification – A visual quality objective that means that management activities are not evident to the casual Forest visitor.

4. **Forest Management Goals and MA 2.1 and 3.1 and HMU Primary Purpose and Desired Conditions.**

Forest Management Goals (Forest Plan, pp. III-2 & III-3):

Forest-wide goals and objectives provide the basis for overall direction regarding the type and amount of goods and services that the White Mountain National Forest will provide. These goals are concise statements describing a desired result to be achieved over the next 10-15 years through implementation of the Forest Plan. All goals are to be achieved in the most cost-effective manner. The following Forest-wide Management Goals apply to the Ellsworth Project Area:

- Conduct all management activities to protect soil and water
- Conduct all management activities with full recognition of the appearance of the Forest, realizing the importance to society of a natural landscape distinct from man-made environments
- Recognize the demand for the importance of day-use areas and driving for pleasure as part of the Forest's total recreation opportunity spectrum
- Use existing roads, trail, and utility corridors to the maximum extent possible. Plan and design access to serve multiple management purposes.
- Design and build any new access, regardless of type, according to standards and criteria that focus on minimum impact.
- Feature management for indigenous wildlife species including those using old-growth habitat, threatened and endangered, sensitive/unique species. Recognize the demand for non-consumptive uses of wildlife, including opportunities to observe.
- Use timber management as one of the tools available to achieve the desired future condition and integrated resource objectives of certain management areas.
- Feature northern hardwood management over softwood. Move toward the culturing of high quality hardwoods that are in demand for specialty products. Assure a stable, reliable source of this raw material to support community stability.

The Primary Purposes of MA 2.1 Lands (Forest Plan, p. III-30) are to:

- Protect and enhance visual quality.

- Broaden the range of recreation options, mainly those offering roaded natural opportunities.
- Provide moderate amounts of high quality hardwood sawtimber and other timber products on a sustained yield basis.
- Provide a balanced mix of habitats for all wildlife species.

The Primary Purposes of MA 3.1 Lands (Forest Plan, p. III-36) are to:

- Provide large volumes of high quality hardwood sawtimber on a sustained yield basis and other timber products through intensive management practices.
- Increase wildlife habitat diversity for the full range of wildlife species with emphasis on early successional species.
- Broaden the range of recreation opportunities, mainly those offering semi-primitive motorized experience opportunities.
- Grow smaller-diameter trees for fiber production.
- Even-aged management will be the most predominant silvicultural system used; uneven-aged management will be used to meet site-specific visual and silvicultural requirements and generally range from 3-30 acres. Uneven-aged management will be considered on a site-by-site basis and generally will be applied on 20% percent of the management area. [Distribution of even- and uneven-aged management is for MA 2.1 and 3.1 lands as a whole across the Forest and is not expected to be prorated equally in individual projects. The selection of even-or uneven-aged silvicultural systems is guided by the land type capability and current species composition of each stand as well as social needs.]

Habitat Management Unit (HMU) for Lands with Active Vegetative Management (MAs 2.1. and 3.1) (Forest Plan, pp. III-11 through III- 15, VII-B-3 through VII-B-16)

See Forest Plan, Appendix B – Wildlife Management Strategy – White Mountain National Forest, pp. VII-B-4 & 5, for a discussion of the Habitat Management Unit Strategy.

Three hundred thirty-seven thousand (337,000) acres of the White Mountain National Forest have been identified as suitable and capable of vegetative management. Effects consist of changes due to timber harvest, habitat management activities, access, and human activity as well as from natural causes. The diversity of plant and animal communities will be greater than that expected in a natural forest setting. This conforms to 36CFR216.27 (g) that states that diversity must be “at least as great as that which would be expected in a natural forest.” In addition, because the majority of the wildlife species in the planning area have a primary or secondary requirement for regenerating or young vegetation, management activities must be directed toward supplying these

habitats throughout the 337,000 acres in a manner that strives for a controlled distribution and even supply across space and time.

Desired Condition for MA 2.1 Lands

The Forest will be a mosaic of stands of predominantly hardwood trees providing habitat for game and nongame species. The stands will vary in size shape, height, and species. Two different conditions will occur among the stands:

- 1) Some stands will consist of trees of about the same age and size; and
- 2) Other stands will consist of a mix of tree sizes and ages ranging from seedlings to very mature trees.

In either case, openings will be interspersed in stands with shapes and sizes compatible with the surrounding landscape.

Along major road corridors, large diameter trees with a variety of bark and foliage characteristics will predominate. These trees will represent both shade tolerant and intolerant species. Numerous views of panoramic and ephemeral landscapes will be provided through moving and stationary vistas. Interpretation of views and natural processes will be provided at most stationary vista sites.

There will be noticeable human activity in these areas resulting from many uses. Evidence will usually be in harmony with the natural appearing environment and consist with good resource management.

Roads will provide access to meet land management objectives. Selected areas will be accessible for off-road motorized forms of recreation activities. Roads will generally be closed to public vehicular traffic. Generally there will be 1 to 3 miles of road per square mile of area.

Desired Condition for MA 3.1 Lands

The forest on these management areas will be a mosaic of stands of American beech, sugar maple, balsam fir, hemlock, white pine, red spruce, paper birch, and aspen. These areas will provide habitat for game and non-game species. Three different conditions will occur:

- 1) The majority of stands will consist of trees of about the same age and size;
- 2) Other stands will consist of a mix of tree sizes and ages ranging from seedlings to very large mature trees; and
- 3) A lesser acreage of the forest will be comprised of individual stands of northern hardwoods, softwoods, paper birch, and aspen of the same age and size grown on a shorter rotation and having a diameter of 6-16 inches.

Uneven-aged management will be considered on a site-by site basis and generally will be applied on 10-20 percent of the management area. The selection of even-or uneven-aged silvicultural systems is guided by the land type capability and current species composition of each stand as well as social needs.

There will be openings of different sizes interspersed with the stands of trees. These intermixed stands will be of irregular size and shape and distributed so that the overall forest will generally be natural appearing.

There will be noticeable human activity in these areas resulting from many uses. Evidence will usually be in harmony with the natural-appearing environment and consistent with good resource management.

A network of gated/blocked roads and trails will provide access for various land management activities. Selected areas will be accessible for off-road motorized forms of recreation activities. Some roads will be open occasionally to provide opportunities for activities such as firewood gathering or hunting access. Generally, there will be 1-3 miles of road per square mile of area.

Habitat Management Unit Desired Composition Objectives

HMU across the WMNF were:

Laid out using the proper aquatic types (wetland component for moose) as centers and then drawing 4,000-acre circles around them to approximate moose home ranges. These boundaries were then adjusted so that they coincided with compartment boundaries on each Ranger District. . . . due to boundary adjustments, each HMU will contain varying amounts of land in vegetative management (MAs 2.1 and 21. and 3.1), but usually will contain at least 4,000 acres in this category. Many HMU contain no management objective over and above the basic 4,000 acres. Only that portion of the HMU in Management Areas 2.1 or 3.1 is addressed in the . . . discussion of composition objectives and indicator species selection. Lands 2.1 and 3.1 are recognized as part of the mature, over-mature, and old growth habitats . . . and can be considered in the overall habitat use analysis for any given wildlife species within each HMU (Forest Plan V-II-B-4 & 5).

Since each of the HMU is based upon diverse moose requirements, at least some of the community types required by the other wildlife species will be present. The remaining community types not represented by moose were added to the mix resulting in an "ideal" habitat mix on each HMU. The "ideal" vegetative community serves as a standard that should be repeated across the HMU and against which each individual HMU can be measured to determine present condition and to direct management toward the desired objectives. Each HMU is

composed of a varying assortment of ecological land types and, as a result, not all may be capable of reaching the “ideal” state (Forest Plan, p. VII-B-4 & 5.).

Each HMU is unique in the quantities of different ecological land types they contain. The result will be projects that may differ substantially from the “ideal” state, but when looked at from a landscape perspective more closely resemble the ‘ideal’ state.

5. **Issues Received During Scoping:** Sixteen (16) letters were received from the following parties in response to the 340 Scoping letters mailed for the Ellsworth Project Scoping Report: Tom Van Vechten of Meridian, CT.; Joe Tully of Melrose, MA; R. Eric Jones of Englewood, FL; Charles W. Kellogg II of Manchester, MA; Todd Myse of Gilford, NH; Brad Crosby of Sanborton, NH; John Alger of Rumney, NH; Fred Lavigne of Center Sandwich; Robert Richardson of Walpole, NH; Lewis Parker of Fayette, ME; G. A. Bowker of Littleton, MA; Dave Bradley of Thornton, NH; Town of Rumney – Office of the Selectman; Rumney, NH; Fred Pickel of Bethpage, New York; and Thomas R. Meler of Beverly, MA.
6. **Comment Categories:** The comments received are addressed below:

Old Growth

“...the oldest stand in the area, which is nearing its two-hundredth birthday appears to be scheduled to be cut. And this I regard as both destructive and unwise . . . There is also a second area of older forest that appears to intersect harvest area 40, in compartment 33, that I would encourage you to reconsider.” At this time, most of the area is relatively young, reflecting the human activities prior to acquisition by the National Forest. Most of the project area, within the timber management zone, was farmed or heavily logged during the nineteenth century. Most timber with any value, was removed prior to land sales to the government in the nineteen twenties to thirties. There were a few exceptions that we discovered in the field. We have proposed that these be managed for old growth values.

In Compartment 154, it was determined that stands 18, 49, 50 and 52 had the kind of characteristics desirable in old growth environment. These are large trees representing climax species, trees with cavities, snags and large, down logs. Stand 49, 50 and 52 will be reserved to provide old growth habitat. On the scoping map, they are located between stands 2, 22, 5, and 29 on the west and 18, 19, 20, and 21 on the east. This area also contains Avery Brook. Stand 18 was one of the older stands listed. At one time, it was populated primarily with large hemlock trees. Many of these were blown down in a storm that occurred in the early 1990s. Generally, hemlock is not regenerating in the openings created by the storm. Our management strategy will be to remove hardwoods, both commercially and non-commercially, and to release hemlock seedlings and saplings. It will take some time to restore the hemlock stocking but when we do; our intent would be to manage it for old growth values.

Our vegetative database includes data on thousands of stands. Each stand has over 30 types of data recorded and some types of data have hundreds of sample entries. Within all this data there are errors or mistakes. As part of our analysis, our stand data was reviewed and corrected. Compartment 33, stand 40, should be listed with an origin of about 1910 rather than 1840. The ages you noted for the three stands are all errors. The clearcut decision was based on the low quality of the trees in the stand. According to our acquisition map this area was listed as “cut over” in 1931. That usually means that there weren’t any valuable trees present when the appraisal was conducted. It is likely that some poor quality, pole size trees existed then and these are the poor quality trees present today. Compartment 154, stands 20 and 21, are another error. This is the area you saw listed as 1800, which can be attributed to a typographical error. The original field inventory shows 1900. The acquisition notes list that area as an “old field” in 1929. I suspect that there were white pine trees present in the “old field”, as they are present today and seem to date to the turn of the century. Stand 21 is mature paper birch with an understory of red spruce and some balsam fir and white pine. Our intent is to harvest the paper birch, which will release the softwood understory. There will be some hardwood regeneration mixed in as well. Stand 20 received a “shelterwood” harvest in 1989. That means that best sources for seed were retained to produce new seedlings. This has occurred and now we can remove the remaining overstory to release the new regeneration.

Clearcuts

“This is the nineteenth year of managing this WMNF under the guidelines and objectives of the 1986 Forest Plan. In general we have not done well regarding achievement of the plans logging objectives. We’ve cut far less timber and we’re far short of the prescribed hardwood regeneration growth for wildlife.”

The current proposed treatments are developed around the vegetative composition, age and condition of the stands within the project area. The clearcuts proposed are in stands that were adversely affected by the ice storm of 1998 or are stands with an abundance of mature or declining species. There are several factors that limit the opportunity for clearcutting in many stands: there is a shortage of mature stands; some potential stands provide quality winter cover and have a higher value for that purpose, some potential areas are highly visible from sensitive viewing locations; and some of the small clearcuts proposed are constrained by inoperable slope and non-timber management areas. We have proposed 77 acres of cut area under group selection. While this does not provide a substitute for early successional habitat for all species, it is effective in producing similar amounts of browse material.

We have proposed that 8 stands receive a clearcut treatment. They total 90 acres with an average size of about 8 acres. Fifty-one (51) acres of the proposed clearcut acres were severely affected by the 1998 ice storm. The trees in these stands have substantial portions of their crowns broken and removed. There are very few trees that are not affected. This does not leave a lot of options. These large wounds invite infection from a host of pathogens that reduce the value and utility of the wood. We can clearcut and satisfy some of the Forest Plan objective for early successional habitat or do nothing. A clearcut will stimulate tree reproduction. Damaged trees will be replaced by new, potentially high quality trees. Stand 40 in compartment 33 was not damaged by the ice storm but does contain low quality trees.

The remaining 30 acres of proposed clearcut is mature paper birch growing over spruce and fir seedlings and saplings. The paper birch matures rapidly. If we harvest the hardwood overstory now, the softwood regeneration will quickly take over the stand and will produce wood products from future harvest. We could also just let the birch die and softwood would still take over, but more slowly. Increasing softwood over hardwoods is another wildlife habitat objective in the Forest Plan. *The results of an HMU analysis, indicates that the forest plan target for even-aged regeneration cutting would be 135 acres. This project will produce 166 acres of those cuts(90 ac clearcut, 42 ac shelterwood and 34 ac overstory removal). This is above the target amount and would make up for shortages in other projects.*

“Why is unit 21 such a large (90 acres clearcut)?” Stand 21, compartment 38 is a 20-acre clearcut. Stand 21, compartment 154 is a 7-acre clearcut. A total of 90 acres is proposed for clearcutting. Most of the clearcut acres are in stands severely damaged by an ice storm or are declining birch. The shelterwood treatments are designed to increase the stocking of white pine and oak.

Describe the Bird Monitoring Area

“Please describe the bird monitoring area.” The bird monitoring was done by an individual associated with Dartmouth College. We are working on getting the results. It has been ongoing for almost 20 years. Recent contact with them has determined that they no longer plan to use this site for their monitoring.

Whole tree harvesting

“Is whole tree harvesting allowed?” We do not allow whole tree utilization. Some mechanical operations are taking the whole tree to the landing. We require that the top portion of the tree be returned to the unit.

Maps for Historic Sites

“Is there a map of all the known historic sites?” All the historical sites are individually mapped. By regulation, this is confidential information and is not available to the public.

Wildlife

“If the logging is to take place where I think it is shown, what about moose and bear habitat?” Our proposed activity would affect both moose and bear habitat in several ways. The cutting will stimulate a substantial increase in browse food for moose. This is likely to attract more moose to the area. Also our treatments will encourage the development of softwoods, which will provide winter cover for moose and many other species. The treatments proposed will create some temporary openings, which will produce some early spring grasses and forbs. These openings will also attract insects that live in dead logs or stumps, such as ants. These are important food sources for bear. Beech trees that show evidence of bear feeding for continued beechnut supplies will be retained. Concentrations of logging slash can also make an excellent site for a winter den.

“I would like to see the small amount of softwood cover managed for deer yards.” The Forest Plan sets objectives for different wildlife habitats, one of which includes softwood types. This project proposes 842 acres of treatments. Only 124 acres are softwoods or mixed wood stands. Many of the treatments are actually designed to increase softwood stocking. Group selection will be used to convert some of the hardwood groups to softwoods or release softwood regeneration in some of the groups that were cut in a previous project. Also, locating cut groups where there is hardwood stocking will renew the supply of winter browse. A shelterwood is proposed to produce white pine and oak and maintain the current level of other softwoods. Even though other stands are typed as hardwoods, many have a softwood component. When possible, our treatments will favor softwood species in the residual population. As a whole, the treatments proposed will substantially increase the softwood component within the project area.

Planting

“Doesn’t the Forest Plan call for softwood planting if more and older softwood is needed?” The Forest Plan sets objectives for different wildlife habitats, one of which includes softwood types. We measure this in subdivisions of the forest, called Habitat Management Units (HMU). These are something like watersheds but analyzed in terms of forest types and age classes. Most HMUs, including those in this project, have a softwood objective that is higher than the current amount. The Forest Plan does not call for planting.

Seeds must be collected from the same area, sown in prepared beds and raised for 2 or 3 years. The site to be planted must be prepared by plowing or ripping the soil. The trees must be pulled from the bed and hand planted in the field. A mechanical release or herbicide treatment is usually needed to later control hardwood competition. However, we do have silvicultural tools we can use to increase softwood populations naturally. We prefer to use natural means. We find areas where softwoods have naturally seeded in and then we remove the hardwood competition. Fire is also an effective, natural tool. We use this more to facilitate white pine and oak regeneration but it also creates an excellent seedbed for other softwood while discouraging hardwoods. We evaluate soil conditions prior to making these decisions. Some soil types are better suited for hardwoods and were originally populated with hardwoods prior to human influence. The greatest risk to softwoods comes from acid deposition. This form of air pollution weakens softwood needles so that they are highly susceptible to freezing.

Snowmobiling

“I am writing you concerning the lumber project in Ellsworth, more specifically about the snowmobile trail that would be impacted by the logging operations proposed for next year . . . Most of our grooming is done at night and will meet 10 to 50 sleds on an 8 hour shift . . . If this trail were to be closed, the results would be dramatic for the businesses and devastating to our club which could possibly dissolve...”

An alternative will be developed that will allow snowmobiling to continue safely, concurrent with logging operations.

SUMMARY OF LANDSCAPE SCALE MANAGEMENT TERMS

Management on the White Mountain National Forest includes consideration of many natural resource factors at several landscape scales. The contrast between vegetation and wildlife management exemplifies this point. Vegetation can be managed at a relatively small scale where as wildlife management may often have habitat requirements that range from less than an acre to thousands of acres. Stands, habitat types, compartments, management areas, and Habitat Management Unit are terms used to help define these differences in various landscape management scales.

A *stand* is a landscape management term typically used to describe a tree community that is sufficiently uniform in composition, age, spatial arrangement, or condition so that it can be distinguished from adjacent communities. A stand may range in size from a few acres to over 100 acres. Stands are management (silvicultural) entities where each stand is managed using either even- or uneven-aged silvicultural practices. Stands, which are typically comprised of trees, are constantly growing and moving through various successional stages.

A habitat type is never smaller than a particular stand size. It is typically a unit of land comprised of a few acres to over 100 acres that supports a distinct successional sequence of vegetation growing on a unique type of soil material. The size of a particular habitat type may range from one stand to several stands in size. Examples of habitat types are spruce/fir, northern hardwoods, aspen, oak/pine, etc. The successional stages that each of these habitat types progress through are: early successional, young, mature and over-mature.

A compartment is a term used to describe a number of stands grouped together. A compartment is a small subdivision of a forested area used for the purpose of orientation, administration, and management (silvicultural) operations. Compartments contain a mix of habitat types and successional stages. These areas are defined by permanent boundary features (road, trail, stream, etc.). Compartment analysis can provide a mid-scale assessment of specific portions of the Forest. Project Areas generally include portions of one or more compartments. Individual Project Areas generally include one or more compartments.

A management area is a large land area with specific management goals. Management areas 2.1 and 3.1 stress vegetation management, but have slightly different goals. Management areas provide us with a landscape-level look at the Forest and are not always contiguous. Management areas often cross-compartment boundaries and subsequently contain multiple compartments.

A habitat management unit is approximately 4,000 acres in size, the boundaries of which follow compartment boundaries. Within a habitat management unit, there must be at least a pond or a stream with wetland potential. Habitat Management Units provide us with a landscape-level look at the Forest. The White Mountain National Forest Land and Resource Management Plan provides direction for what variety of habitat types and successional stages would be found on MA 2.1 and 3.1 lands an “ideal” habitat management unit. The Forest Plan further defines this “ideal” desired condition by stands that are managed using even- and uneven-aged silvicultural management systems.

When determining the desired condition for a habitat management unit the existing condition of that area is compared with the desired condition for an “ideal” habitat management unit. The difference between the existing and desired condition determines the “need” for management at the landscape level. If this analysis determines that there is a need for management at the landscape level, then the manager looks for opportunities to manage individual stands that will move the existing condition of the landscape (HMU) toward the Forest Plan desired condition. The areas with opportunities for management serve to define the Project Area. Stand-level management is constrained by: Forest Plan silvicultural guidelines, previous management within the Project Area, potential future management within the Project Area and at the landscape level, and other resource considerations (wildlife, soils, water, recreation, visuals, etc.).

